REFERENCES

1. Baz, A, Imamand, K & Mc Coy, J 1990, 'Active vibration control of flexible beams using shape memory actuators ', journal of sound and Vibration, vol.140, no.3, pp. 437 -456.

2. Bai , MR & Lin, GM 1996, 'The development of DSP-based active small amplitude vibration control system for flexible beams by using the LQG Algorithms and intelligent materials, journal of sound and vibration,vol.198, no.4, pp. 411-427.

3. Marur, SR & Kant , T 1996, ' Free vibration analysis of fiber reinforced composite beams using higher order theories and finite element modelling ', journal of sound vibration, vol.194, no.3, pp. 337-351.

4. Peng , XQ, Lam, KY & Liu, GR 1998, 'A vibration control of Composite Beams with Piezoelectrics: A Finite Element Model with third order theory ', Journal of Sound and Vibration, vol.209, no.4, pp. 635 - 650.

5. Reza Moheimani, SO, Pota, Hemanshu, R, Petersen & Ian, R 1998, 'spatial control for active vibration control of piezoelectric laminates', Proceedings of the thirty seventh IEEE conference on decision and control, Florida, USA, pp.4308-4313.

6. Park, CH & Baz, A 1999,' vibration control of bending modes of plates using active constrained layer damping ', Journal of sound and vibration, vol. 227,

7. Lin, Chien-Chang & Huang, HN 1999, 'vibration control of beam- plates with bonded piezoelectric sensors and actuators ', composites and Structures, vol. 73, no.1-5, pp. 239-248.

8. Liu, GR., Peng , XQ ,Lam, KY & Tani, J 1999, ' vibration control simulation of laminated composite plates with integrated piezoelectrics ',journal of sound and vibration, vol. 220, no. 5, pp. 827-846.

9. Lee, Seong-Cheol, Kwon, Tae-Kyu, Yun & Yeo-Hung 2000,'robust control of glass fiber composite beam using m synthesis algorithm ', International Journal of the Korean Society of Precision Engineering, vol. 1, no.2. pp. 76-83.

10. Youn, SH, Han, JH & Lee, I 2000, ' Neuro- -adaptive vibration control of composite beams beams subjected to sudden delamination ', journal of Sound and Vibration, vol.238, no.2, pp. 215- 231.

11. Huang, D & sun, BH 2001, ‘approximate solution on smart composite beams by using MATLAB ‘,Composite structures, vol.54 , no.2-3 , pp. 197-205.

12. Valoor, manish , T Chandrasheakara , k, agarwal & sanjeev, 2001, ‘self adaptive vibration control of smart composite structure beams using recurrent neural architecture ‘, international journal of solids and structures, vol. 38, pp. 7857-7874.

13. Sun, B & Huang, D 2001 , ‘ vibration suppression of laminated composite beam with a piezo – electric damping layer ‘, composite structures, vol.53,no.4,pp.437-447

14. Williams, KA chiu, G & Bernhard , j 2002 , ‘Adaptive – passive absorbers using shape memory alloys ‘, journal of sound and vibration , vol 249, no.5, pp.835-848

15. Chen, SH, Lien-Wen, Lin, Chung-Yi & Wang, CC 2002, ‘Dynamic stability analysis and control of a composite beam with piezoelectric layers ‘,composite structures’,vol.56,no.1,pp97-109.

16. Song, G, Qiao, PZ, Binienda, WK & Zou, GP 2002,’Active vibration damping of composite beam using smart sensors and actuators’, journal of aerospace engineering , vol .15.no.3,pp .97-103

17. Kermani, MR, Moallem, M & Patel, RV 2002, ‘optimizing the performance of piezoelectric actuators for active vibration control’, Proceedings of the 2002 IEEE Conference on Robotics and Automation, Washington DC. pp. 87-92.

18. Ramtekkar, GS & Desai, YM 2002, ‘Natural vibrations of laminated composite beams by using mixed finite element modelling ‘,journal of Sound and Vibration, vol. 257, no.4, pp.635-651.

19. Baillargeon, BP & Vel, SS 2004, ‘Active vibration suppression of smart structures using piezoelectric shear actuators ,’proceedings of the fifteenth International Conference on Adaptive Structures and Technologies, Bar Harbor, Maine. pp. 141-148.

20. Moita S , jose, M, cristovao, M , Soares, M &Carlos, A 2005, ‘ Active control of forced vibration in adaptive structures using a higher order model’, Composite structures , vol.71 , no.3., pp. 349-355

21. Kadioglu & Fethi 2005,’Free vibration of composite re-bars in reinforced structures’, journal of sound and vibration,vol. 287, no. 4, pp. 1013-1026.

22. Hu & Vukovich, G 2005, ‘Active robust shape control of flexible structures ‘, Mechatronics , vol .15,pp.807-820

23. Rustighi E, Brennam MJ & Mac BR 2005 , ‘A shape memory alloy adaptive tuned vibration absorber : design and implementation ,’ smart materials & structures , vol.14,no.1.pp.19-28.

24. Williams, KA, Chiu, G & Bernhard RJ 2005 Nonlinear control of a shape memory alloy adaptive tuned vibration absorber Journal of Sound and Vibration, vol. 288, pp.1131 1155.

25. Zhang, wenming , meng , guang, Li &Hongguang 2006 , ‘Adaptive vibration control of micro-cantilever beam with piezoelectric actuator in MEMS’, International journal of advanced manufacturing technology, vol.28, no.3,pp.321-327.

26. Zhi-cheng , QU, Zhang, XM, Wu, HX& Zhang, HH 2007 , ‘ optimal placementand active vibration control for piezoelectric smart flexible cantileaver plate’, journal of sound and vibration , vol .301,pp .521-543

27. Xinke & Gou 2007, ‘ Active vibration control of a cantileaver beam using bonded piezoelectric sensors and actuators ‘, The eighth international Conference on Electronic Measurement and Instruments, pp.186 -191.

28. Donoso, A & Sigmund, O 2008 ,’optimization of bimorph actuators with active damping for static and dynamic loads ‘,struct multidisc optim, Springer Verlag. vol. 38, no. 4, pp. 171-183.

29. Moita, JS 2008, ‘ optimal dynamic control of laminated adaptive structures using a higher order medal and a genetic algorithm’, Computers and Structures, vol.86, no. pp.198-206.

30. Kiral, zeki, malgaca, levent, akdag, & Murat 2008, ‘Active control of residual vibrations of a cantilever smart beam’, turkish Journal of Engineering and Environmental Sciences, vol.32, no. pp. 51 - 57.

31. Umesh, K, Ranjan G 2009, ‘shape and vibration control of smart composite plate with matrix cracks,’ smart materials and structures , vol 18, no.2,pp.25-36

32. Aguiar, RAA, Savi, MA & Pacheco, PMCL 2013, Experimental investigation of vibration reduction using shape memory alloys Journal of Intelligent Material Systems and Structures, vol. 24, no.2, pp. 247 261

33. Dao Gong, Jin-song Zhou and Sun, WZ 2013, On the resonant vibration of a flexible railway car body and its suppression with a dynamic vibration absorber Journal of Vibration and Control, vol. 19, no.5, pp. 649 657.

34. Shivaji S. Aher international journal of science and management vol.no.4,issue 10, oct2015

35. Yoshiaki Itoh, Toru Yamazaki, Hun-ok Lim and Kenichi Takemura, Robot development project with humanand eco-friendly smart materials toh et al. Robomech J (2016) 3:21 DOI 10.1186/s40648-016-0060-4

36. Awcock, G.J. and Thomas R. , 1995. Applied Image Processing. MacMillanNew Press Ltd., London.

37. Baglietto, P., Maresca, M., Migliardi, M., and Zingirian, N., 1996. ImageProcessing on High- Performance RISC Systems. Proceedings of the IEEE,Vol. 84, pp. 917-930.

38. S. Hesse, "Grippers and their applications", Blue Digest onAutomation, 2004, Festo AG, Esslingen, pp. 9-25.

39. C. Stăncescu, "Theoretical - experimental research of the gripping systems with jaws for the industrial robots", PhD dissertation, Transilvania University of Braşov, Romania, 2009.

40. A, Ali, M. Madariaga and D. McGeary. "Assistive robotic arm", Final Year Project Report, (2007).

41. M. Harshe, C. Menezes, B. Walzade and Prof. L. G. Navale, "An Innovative Multi-DOF robotic arm assembly for press shops", Final Year BE Project Report, (2007).

42. R. Krishna, G. S. Bala, A. S. C. S Sastry, B. B. P. Sarma and G. S. Alla, "Design and Implementation of a Robotic Arm based on Haptic Technology", Int. J. of Eng. Research and Applications, vol. 2,no. 34, (2012).

43. Abdel-Malek, K. and Paul, B. (1998). "Criteria for the Design of Manipulator Arms for a High Stiffness to Weight Ratio", SME Journal of Manufacturing Systems, Vol. 17, No. 3, P.P.209-220.

44. Alazard, D.; Chretien, J. P. (1992). "The Impact of Local Masses and Inertias on the Dynamic Modeling of Flexible Manipulators".

45. [1] M. Akdağ, Design and analysis of robot manipulators byintegrated CAE procedures, DEÜ Fen Bilimleri Enstitüsü,Doctoral Thesis, 2008.

46. A. Kazi, G. Merk, M. Otter and H. Fan, Design optimization of industrial robots using the Modelica multi-physics modeling language, Proceedings of the 33rd ISR (International Symposium on Robotics), October 7-11, 2002, Vol.7, p. 11.

47. Baharuddin M Zafri et al. (2005),"Analysis of Line Sensor Configuration for the Advanced Line Follower Robot." Proc. of Student Conference on Research and Development (SCOReD),Bangi, Selangor, Malaysia.

48. Shaked Avner and John Sutton (1987), “Product differentiation and industrial structure”, The Journal of Industrial Economics, pp. 131-146, Sutton.

49. Line Following Using PID Controller,ROBOCON 2012, http://students.iitk.ac.in/roboclub/data/tutorials/pid.pdf

50. Ghosh Soumen and Roger J Gagnon (1989), “A comprehensive literature review and analysis of the design, balancing and scheduling of assembly systems.” The International Journal of Production Research 27.4, pp. 637-670.

51. Fung, Eric, H.K., Chung, Allison, P.L., “Using ARMA models to forecast work piece roundness error in a turning operation”, Applied Mathematical Modelling, Vol. 23, pp. 567- 585, 1999

52. Fung, Eric, H.K., Cheung, S.M., and Leung T.P., “The implementation of an error forecasting and compensation system for roundness improvement in taper turning” Computers in Industry, Vol.35, pp. 109- 120, 1998

53. Fung, Eric, H.K., Cheung, S.M., and Leung T.P., “Roundness Control in Taper Turning using FCC Technique”, Proceedings of the American Control Conference, Albuquerque, New Mexico, pp.1068-1069, 1997

54. S. Arora and A. Gupta, Industrial automation and Robotics, Laxmi Publication Pvt Limited, 2009.

55. M. P. Groover and M. Weiss, Industrial Robotics-Technology, Programming and Applications, McGraw-Hill International.

56. P. Singh, A. Kumar and M. Vashisth, "Design of a Robotic Arm with Gripper & End effectors for Spot Welding," Universal Journal of Mechanical Engineering, pp. 92-97, 2013.

57. S. R. Deb, Robotics technology and Flexible automation, Mc Graw Hill, 2004.

58. R. Mittal and I. Nagrath, Robotics and Control, Tata McGraw Hills, 2003.

59. Borst, C., Fischer, M. and Hirzinger, G. (1999), “A fast and robust grasp planner for arbitrary 3D objects”, Proceedings of the 1999 IEEE International Conference on Robotics and Automation, pp. 1890-6.

60. Ding, D., Liu, Y.-H. and Wang, S. (2000), “Computing 3-D optimal form closure grasps”, Proceedings of the 2000 IEEE International Conference on Robotics and Automation, pp. 3573-8.